

Unit 1: Site Design

Everything you do in the rest of the course is based on this design.

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Study Guide Unit 1 Site Design

Overview

 Unit 1 is worth 10% of your portfolio grade

Podcast - Introduction to Unit 1

This unit forms the foundation for all the rest. It requires you to go through a fairly lightweight design process in which you identify

- the website you will create over the rest of this course,
- the kinds of people you intend it for,
- the kinds of functionality they might need, and
- a rough idea of the look and feel of the site.

You will likely refine this design as the course progresses, but it will help to provide a focus and rationale for all your later work—it is important not to skimp on this. If you do not do this well, you *cannot* do any of the rest of the work well. As noted in Unit 0, any work you do, no matter how good, will not be marked unless its relationship with Unit 1 is made explicit.

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Learning Outcomes

When you have completed this unit, you should be able to

- identify the potential audience and purpose for a website.
- use a simple but structured process to identify how the website will address the needs of the anticipated audience.

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The Problem

Throughout the course you will be creating a website that will become increasingly dynamic. This exercise requires you to think about what the site you create will be for and how this site should be developed. Note that **you may refine this plan as the course develops by adding further posts that amend or extend those you create here**, but the work you do for Unit 1 will inform all the work that you do later in the course. Because this plan forms the foundation for all that follows, it is important that it is done well.

While we provide a minimal process that we would like you to follow, do feel free to adapt it and elaborate it to suit your preferred way of working. This is a minimum prescription of what we would like you to do, but you are very welcome and encouraged to go further, make modifications, or use similar related methods.

If you have any good ideas to improve the process, please share them! If you do use a process that substantially modifies (rather than just extends) the method we suggest, then please be sure that you justify why you have changed it in your learning diary so that we can give marks accordingly.

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Process Guide



All of the outputs for this unit should be submitted as part of your learning diary. You may choose to include each of the elements listed below in one large blog post on the Landing, or you may submit separate blog posts for each part of the process—the choice is yours. Ideally, you should make your blog posts available to at least the rest of the COMP 266 group but, minimally, you must make them available to your tutor, and (in any case) **enable comments to be made on your posts.** (See Unit 0 if you need more information on using the Landing.)

This is an outline of the tasks: further information on most of the specific elements is provided below and should be referred to before starting your work.

here is the requirements for submission

- **Identify and write the main themes and purposes of your site.** The first step is to decide what kind of website you want to make.
- **Identify at least *three* different personas, at most ten.** These are detailed descriptions of people who might come to your site.
- **Identify at the very least six scenarios, at most 20, including at least one for each persona.** Explain why they might come to your site, what they would be looking for, etc.
- **List further requirements:** other considerations and concerns such as legal, social, organizational, and contextual constraints.
- Bearing in mind the themes, purposes, personas, scenarios, and other considerations, **sketch a rough mock-up of your site** using any tools you like.
- **Make a site map** showing the structure of the website and the relationship between the various pages.



Write a reflective commentary on what you have done in your learning diary.



Submit the work to your tutor for comment by directing him or her to your blog entry on the Landing using the 'Design documentation review' link on this Moodle site. Normally, you will **receive feedback within seven to eight business days,** during which time we encourage you to work on HTML tutorials. Your tutor may suggest changes or amendments to help ensure your success in the course. You can also ask for feedback from others in the course.

If necessary, make changes based on feedback from your tutor and/or others.

See the links in the following subsections for details on how to complete your work for Unit 1.

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Themes and Purposes

You should give a fair bit of thought to deciding what your site is for before you do anything else. What kind of audience is it intended for? What kind of people will visit it? Why will they want to come there? Will it be formal or informal? Is it about a particular thing, or idea, or product, or social group, or hobby, or subject you want to learn about? More importantly, why does it matter to you?

It is really important that you choose a topic for your site that will motivate you through about 100 hours of serious work. **Ideally, you should choose something that will have a real and meaningful value to you after the course has finished, that you will want to maintain and develop over months or years.** You are welcome to develop a site for someone else if you wish, if that helps to motivate you to do it well.

There are many reasons that you might wish to build a website. Here are a few examples to help you to start thinking about the possibilities, but you are completely welcome to choose something different:

- a site about a hobby or interest that you wish to share
- a site to support a club, society or place of worship of which you are a member
- a site to help people to learn something (or perhaps many things)
- a site to help you sell something
- a site to help others
- a site to meet others
- a site to provide information about something you consider to be important
- a site about an author, musician, or artist
- a memorial site for a loved one
- a site about your local neighbourhood, town, village, or city
- a site to promote yourself in the job market
- a site about the flora and/or fauna in your local area
- a site about a cause that you care about

technical writing CRUD tools

r/technicalwriting & WTD

tech writing divio doc sys + CTRT method

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The list is endless. If you are stuck for ideas, spend some time using Google or other search engines to discover and explore sites of the type you want to create. This may well spark new ideas. When choosing a theme or purpose, it is important to bear in mind the limitations of what we will be doing on this course. While we do not want to constrain you too much, bear in mind:

- We will be asking you to add content and, very importantly, dynamic programs to your site later in the course, so it may be helpful to think about whether your intended purpose gives you scope to create rich and dynamic content.
- You should avoid being too specific about a single context of use because you will need to show that you have considered multiple devices and browsers as well as people with different abilities and disabilities—for instance, an intranet site used by people without disabilities using a single specified browser would not be sufficient to cover this requirement.
- We will not give marks for quantity: be realistic about the amount of content that you can reasonably create or (legitimately) re-use in the time available.
- While we encourage diversity, please be sensitive to the possibility of offending others. Your site should not break any Canadian or local laws nor encourage them to be broken, should not incite hatred, spread deliberate falsehoods (though satire and fiction are fine!), nor otherwise be likely to greatly upset others in the course.

If you are not sure, ask your tutor. We don't want to inhibit your creativity or passion, but it is important to remember that this course involves others whose beliefs and opinions may be very different from your own, and we would like to encourage a safe and trusting social space for the course.

- Be careful to avoid going too far in thinking of functionality that requires processing on the server: anything requiring a sizeable back-end database would be almost impossible, as would anything which would involve user-generated content being displayed to other users on your site (e.g., discussion forums, blogs, friend-walls, etc.) and even simple logins based on user IDs would be difficult because you would have no means to control the storage of such information on the server.

You may be able to deal with at least some of these problems by harnessing an external site like Facebook or Twitter or Google in Unit 7 of the course, so you should not totally discount such ideas, but avoid relying on them for your main site functionality: for at least 90% of the course you will not be able to implement anything like that. While it will have interactive elements and will use facilities from other sites, your site will, for the most part, be concerned primarily with publication.

If you are not sure, ask the tutor. Note that we have built in a point to receive feedback from the tutor in this unit to ensure you have identified a manageable and achievable task.


For this part of the assignment, two or three paragraphs of description would typically be about right, though you may use more shorter paragraphs, lists, tables and so on as you feel would be appropriate. The description should be sufficiently detailed about the purpose, background, and motivations so that someone else would be able to understand clearly what you are aiming for and what you are doing. It should not include any description of how it works or what it looks like at this stage, nor too much detail about the intended audience—that comes later.

The description should be sufficiently detailed about the purpose, background, and motivations so that someone else would be able to understand clearly what you are aiming for and what you are doing. It should not include any description of how it works or what it looks like at this stage, nor too much detail about the intended audience

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Personas

The main purpose of creating three to ten personas is to give you empathy with the kinds of people who might be visiting your site so that you can think about it more easily from a different viewpoint.

Typically,  personas would be based on stereotypical or archetypal people, but by describing them carefully and giving them a “life” (including a name, age, occupation, interests, hobbies, political and religious beliefs, even clothing preferences), you should find it easier to imagine how they might use and react to your site. Give them a history. Try to make them as different from yourself as possible.

This is a very subjective design approach that is used in many design-related industries to help generate ideas, discover problems, explore designs, and give richness to the experience. Personas provide a means to explore your ideas at every stage from different perspectives. When you add something or are contemplating a design change, you are able to ask questions like, What would John think of this? or Would this help Mary navigate the site more easily? or How would Ahmad use that?. This approach really comes into its own when you are working in teams, but it’s a valuable exercise to you even as an individual site creator.

Typically, a single persona would consist of a page or two that would include

- a name;
- a picture (any random photo will do, but avoid well-known public figures unless they are your target audience—[make sure you cite this correctly!](#));
- demographics (age, gender, cultural group, religion, etc.);
- knowledge and skills (particularly as they relate to the site or its contents);
- goals and motives (particularly as they relate to your site and why they would be coming there);
- approach to using the site (are they butterflies or crawlers? do they like structure or do they like to dive in? are they casual visitors or likely to keep coming back?, etc.)

Do spend time exploring some of the suggested resources given at the end of this unit and throughout the course—there are many other ways to build personas and different aspects that may be significant. Feel free to include or exclude different attributes as you see fit, as long as you cover the basics. We have provided a number of links describing this process more fully as well as templates that you might find useful when developing your personas. However, as usual, feel free to seek your own and, if you find good resources, share them with the rest of the course through bookmarks on the Landing.

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Scenarios

Creating scenarios will help you identify what your site needs to provide and the kinds of things that would be most important (which in turn will affect how you lay out pages, menus, and navigation on your site).

Scenarios are used to help you walk through your design. They give you a chance to think about what people will do when they get to your site, why they want to be there, what tools or information they will need, and (consequently) how easy you should make it for them to get to them. If you are familiar with the concept of the use case, it might be helpful to think of scenarios as particularly rich and inclusive use cases at the more informal end of the spectrum. Indeed, there is no harm in employing use cases to generate your scenario.

Used in conjunction with your personas, scenarios are a powerful design tool. For instance, imagining that a purpose for the site is to help programmers learn about JavaScript, you might describe a scenario in which someone comes to your site looking for information on the syntax of a specific JavaScript function. Different people will have different needs and different interests in seeking that information.

John might be a task-driven sort who just needs the information as quickly and easily as possible and who cares little about the beauty of the site, whereas Ahmad might be put off by plain text and may be wanting to explore the background so would need further links and descriptions, while Mary might be a sociable sort who wants to find about related concepts so would need some semantic information and maybe ways of finding and talking to people in her quest. Each purpose can lead to a different scenario. Once you get to the design, you might be able to find ways of combining different interests and needs.

Typically, we would expect at least half a dozen scenarios (at least one per persona), but there is no harm in doing more. Once you get to about 20 scenarios for a single-person project like this, you have probably gone far enough, unless they are very simple or similar. There is a balance between detail and descriptive power here that you need to be aware of so, if you find a lot of scenarios coming out of the process, look carefully at them and maybe consolidate those that are very similar.

Your scenarios should be sufficiently broad to encompass people using different devices, including mobile devices, and with an indefinite range of potential disabilities.

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Further Requirements

Once you are familiar with website creation, you will almost certainly start this process while looking at other things, especially the technical constraints, available affordances, and the general technical, social, organizational, and broader context. Starting with a blank slate and few preconceptions about the technology is considered by some to be a good idea, but most of us are working in or for organizations and/or with limited budgets, so it is usually unavoidable to consider the full context of the site. You might, for example, have big constraints based on corporate style, legal or commercial pressures, existing technology installed, house standards for code development, and so on.

At this point, you may want to add new personas and scenarios suit the fuller picture you have provided. For example, if someone is likely to access the site with an iPad, it is very likely that they would have a different persona and would be in a somewhat different scenario than were they to be accessing your site with a cellphone or a personal computer.

- open source license/copy right
- warning for damage to data, legal
- legal, warning to damage to system
- credits to MSG, or other linked tools

Unit 1 Site Design

Mock-up and Site Map

This is the part of the process where you take what you have learned from your themes, purposes, scenarios and personas, and turn them into a design. The purpose of the mock-up is to assist the creators of the site content (you in this case) to know what the site looks like and how it all links together. It does not need to have real content (text, pictures, etc.) apart from major headings, menu items, etc., nor does it need to look or feel exactly like the real thing. It's a sketch of the rough layout and structure of the site.

Feel free to try out a variety of ideas and sketches as you go through this, and treat it as an iterative process: try something, go back, change it, try again.

Look at other sites that share a similar purpose to yours, as many as possible, to see what they do and how they do it. Make notes when you find something you like or something that doesn't seem to work well. You might like to share those notes as part of the documentary evidence of having met the learning outcomes for the course.

Try to concentrate more on the informational and navigational side of this than the detailed look of a site.

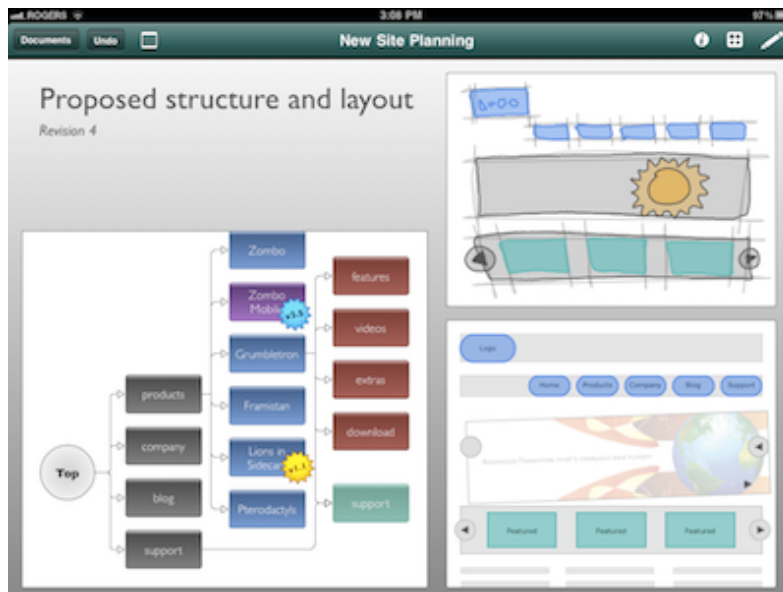
Good website design is nearly always far more about letting people do what they want to do in the simplest and/or most interesting way possible, not about looking beautiful. Of course, this is only a generalization, not a fixed rule: for instance, if the purpose of the site is to show your artistic skills it should do so in a manner that demonstrates, augments, or complements that purpose.

For the diagramming of the site, you should use whatever technology you feel most comfortable with and take an approach that makes sense to you. Generic drawing tools such as those provided in OpenOffice Draw may be fine, or you might use a paint or drawing package, a diagramming editor such as Visio, Dia, or Omnigraffle, or even a dedicated mock-up tool (the illustrations include output from Omnigraffle and iMockup, both on the iPad, but there are plenty of other good and free/cheap tools out there). We provide links to dedicated tools on the “Resources” link below should you wish to use them, but bear in mind there will be a learning curve as you discover how.

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Examples of such designs and useful tools are provided in the suggested resources, but feel free to find your own. Typically, a site design would include

- **Mock-up.** This may be very simple sketches or richer pictures or even actual HTML pages, perhaps cut and pasted from other sites of the main things on the main pages. It should include at least the main page and the major sub-pages of the site. It does not need to look beautiful, and it does not need to include content



Example of mock-up made using OmniGraffle.



Example of mock-up made using iMockup.

beyond main headings and menus, etc., but it should provide a sufficiently accurate rendition that a web designer

- need to package together
1. mock up
 2. site map (network diagram with relationships)

create a number of very similar pages that differ in detailed content but are roughly similar in theme or purpose: there is no need to create a sketch of every one of those screens.

- **Site map.** This is necessary output and would typically be a hierarchical or network diagram showing the pages and their relationships with each other. These will turn into links between the pages and help to determine the way that you put menus and other navigation cues together.

We would normally expect the site to contain at least ten and typically no more than 20 pages,

although this is purely intended as a rough guide to the amount of work we expect of you: there is plenty of room for flexibility depending on your design needs and constraints. For example, you might use a tabbed interface for some pages, thereby reducing the need for separate pages. Conversely, you may include more pages where the content is very similar or trivial to produce (for instance, if you provide a gallery of photographs in which each appears on a separate page). The fundamental principle is that your site should be as complex as it

needs to be, bearing in mind that you do not have unlimited time to build it.

The map may be quite simple or very rich. For example, you might find it useful to relate this to your scenarios by showing paths through the site taken for different purposes in a different colour, as a separate sub-diagram, or using labels to indicate the purpose. Remember, the purpose of this is to allow you to develop your site more effectively and to be able to communicate it to others: in real life, it might be used by a design team to help coordinate work, so clear communication is really important.

- **(optional) Text descriptions** explaining the design rationale, related to the expected uses of the site or your scenarios. This can be very brief much of the time: for instance, you might provide a diagram showing a relationship between one page and two others, with a label to explain why users would choose one rather

than the other. Or you might provide a label for a “terms and conditions” link explaining the legal need for it.

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What Can You Do with JavaScript?

If you are not already familiar with what JavaScript can do, you may specify elements that will be difficult or impossible to implement. In the final unit we will be making use of external services that can overcome some of JavaScript's limitations, but for the most part, you should not base your design around an assumption that you will be able to manage persistent data on your own website (e.g., discussion forums, blogs, shared record systems, wikis, updatable databases). To help you to keep things within reasonable bounds, here are a few ideas about what JavaScript can and cannot (easily) do.

Some Examples of Things JavaScript Can Do Pretty Well

- animating menus
- validating forms (checking a credit card number is valid, that the required fields are filled in, etc.)
- performing conversions (e.g., currency, temperature, weights, measures)
- auto-filling forms
- opening pop-up windows (usually best to avoid this one!)
- generating random passwords
- showing and hiding elements on a page (pictures, paragraphs, etc.)
- writing content to a page that varies according to context (e.g., different content for different times, countries, browsers, devices)
- providing a very simple (read-only and small) database
- changing images as a mouse moves over them
- performing calculations
- generating calendars
- generating random numbers, e.g., for a lottery or dice game
- animating or moving images on a page (automatically or under user control)
- creating rich-text editors for use on web forms
- writing and reading from cookies (keeping persistent data from one visit to the next)
- encrypting or encoding or otherwise manipulating data on a form
- sorting data in a table
- simple games (like hangman, join the dots, card games, etc.)
- controlling other media like videos or animations
- creating photo albums with neat transitions

- redirecting to a different page

To get a better idea of the potential, please visit sites offering free scripts (we will be using these later in the course) such as <http://www.opensourcescripts.com/dir/JavaScript/> or <http://webdeveloper.earthweb.com/webjs/>, which provide many thousands of code snippets, functions, and full-blown-programs to inspire you.

Some Examples of Things JavaScript Cannot Do Without Further Technologies and Tools

- store or manipulate information on a web server, including in a database
- access content from another browser window
- make changes to your computer's hardware or settings
- access your local file system you can use electron.js for this
- access your local network

The general principle is that if there is a risk that a misbehaving site could, without your explicit permission, change something you wouldn't want it to change or view something you wouldn't want viewed, it can't be done. Different browsers have different vulnerabilities that are discovered from time to time but, as a matter of principle, all try to limit JavaScript to things that are harmless.

Unit 1 Site Design

Indicative Grading Criteria

The markers will generally follow the suggested guidelines given below in evaluating your work for Unit 1.

Grade	Criteria
A	Your design fits very well with the site's purpose, and with the personas and scenarios you have created, with clear links between purpose, scenario, personas, and design. Excellent presentation. Everything is very well communicated with clear illustrations, clear and unambiguous text, and an easily navigable structure and design. Your design is extendible to accommodate all the requirements for the rest of the course outputs. An experienced web designer could take your design and create a site that would be an excellent fit with the purposes and needs that it is intended to address.
B	A clearly communicated set of design documents that show strong continuity and linking between purpose, scenarios, personas, and design. Well presented, in a form that an experienced web designer would find complete and sufficient to design a website that would fit the purposes and needs it is intended to address. Complete.
C	A good set of design documentation that provides sufficient information for an experienced web designer to create a professional website addressing the needs of its users, at least as identified in the personas. May be some minor weaknesses in presentation and may be slightly incomplete in some respects, or there may be aspects of the design that do not fully take into account the purpose, scenarios, or personas. Personas or scenarios may have insufficient detail or be slightly unrealistic.
D	Some weaknesses in presentation, limited continuity and linking between purposes, personas, scenarios, and/or the design. Insufficient detail to be able to judge the effectiveness or meaning of some elements. Unreflectively chosen personas or scenarios that do not relate well to the purposes of the site. Limited potential for development to meet the learning outcomes of the course.

Unit 1 Site Design

Resources

No idea where to begin? Explore this growing list of site examples that serve different purposes and use different dynamic technologies to give a richer experience.



If you find other useful resources, please add links to them on [the Landing](#) so that others may benefit. You may use such activities as supporting evidence of having met the learning outcomes.

Design Process

Interesting discussion with contradictory views talking about use cases, use-case scenarios, scenarios, and other techniques for building and generating a system: http://www.jeanweber.com/newsite/?page_id=42

Personas and Scenarios

A good, simple description of how and why to use personas and scenarios: <http://www.webdesignfromscratch.com/goal-oriented-design/about-personas.php>

Website user design experience (the basics on scenarios and personas): <http://www.suite101.com/content/user-experience-design-a28857>

Another very basic introduction: <http://www.blastam.com/key-scenarios-personas.aspx>

Slideshare presentation on the subject: <http://www.slideshare.net/OMShare/personas-and-scenarios>

Persona examples: <http://blockquote.be/2006/08/04/more-persona-examples/>

Persona templates (image format): <http://www.suzeingram.com.au/2009/04/persona-template-based-on-adaptive.html>

Persona templates (PDF and Adobe CS4): <http://zakiwarfel.com/archives/persona-templates/>

Persona template (Word template): <http://sites.google.com/site/superuserfriendly/templates/persona-template> and accompanying scenario template at <http://sites.google.com/site/superuserfriendly/templates/scenario-template>

Personas and usage scenarios with examples: <http://www.akendi.com/downloads/Akendi-Personas-Explained.pdf>

Paper describing reasons and purposes as well as the process of creating personas: <http://agile.csc.ncsu.edu/SEMaterials/Personas.pdf>

Pictures

Flickr has many photos that are released under a Creative Commons license—you'll find the option to limit searches to these in the advanced search options. Make sure that you follow the license conditions and say where the picture comes from!

Wikimedia Commons is a wonderful source of openly licensed images, many of which are public domain so can be used without licensing conditions but do make sure you follow whatever license terms are required for pictures you select.

Site Designs

How to draw a site map: http://www.boxesandarrows.com/view/site_diagrams_mapping_an_information_space

Tools

Good set of free wire-framing and mock-up tools for many platforms: <http://speckyboy.com/2010/01/11/10-completely-free-wireframe-and-mockup-applications/>

Further Reading

Useful primer on web information architecture (goes further than our simple design approach): <http://www.fatpurple.com/2010/03/01/web-information-architecture-deliverables-and-diagrams/>